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Selected Abstracts

from

Soviet Biomedical Journals

No. 11

Prepared by

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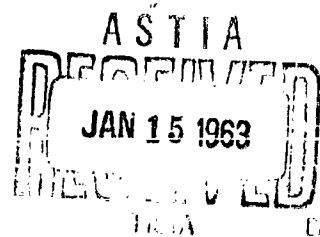
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687. Bakhrakh, E. E. et al., To the characterization of the polysaccharide fraction of the plague bacillus. Zh. mikrobiologii, etc. 33 (1962) 6:126-130.  
(From the State Scientific Research Institute of Microbiology and Epidemiology of the South-East of the USSR - "Mikrob" Institute.)

As the authors stated in the introduction to their article, repeated attempts to produce the complete antigen of the plague bacillus according to the method of Boivin and Mesrobianu had failed. However, Bakhrakh and his associates (Izvestiia Irkutskogo protivochumnogo instituta, etc. 18 [1958] p. 127) isolated from the organisms of the EV strain with the aid of hydrolysis with 0.1 N acetic acid a specific polysaccharide fraction. This proved to be a hapten not toxic for white mice and not immunogenic, but capable of producing at high dilutions a ring precipitation with plague antisera and was accordingly recommended for titration of the latter (Dzhaparidze and Sidorova, Zh. mikrobiologii, etc. [1956] No. 9, p. 78). The fraction also produced an intradermal reaction in guinea-pigs which had recovered from plague or had been immunized against it (Pavlova, Trudy inst. "Mikrob." Saratov [1958] No. 2, p. 28; Zaplatina and Konnova, Trudy Rostov.-na-Donu. . . protivochumnogo instituta, Astrakhan 10 [1956] p. 96; Bakhrakh et al. Trudy inst. "Mikrob" No. 4, p. 63).

A chemical analysis of this fraction by Bakhrakh and his associates recorded in the present article, which those interested in the immunochemistry of P. pestis ought to study in the original or in full translation, led to the following conclusions:

"1. The preparation, isolated according to White's method from P. pestis, is not a pure polysaccharide. The unpurified fractions contained considerable admixtures of protein, which could be removed by repeated fractionated sedimentation with alcohol, treatment with chloroform according to Sevag et al. (Jl. Biol. Chem. 124 [1938] p.425), prolonged hydrolysis with 0.1 N acetic acid or precipitation of the protein with trichloroacetic acid.

2. The protein-free purified substance was a simple polysaccharide-polypeptide complex which was serologically active and capable of producing an allergic reaction in guinea-pigs recovered from plague or immune against it.

3. Removal of the polypeptide moiety through trypsin digestion led to a marked lowering of the allergic activity of the preparation."

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688. Faibich, M. M. and Dzharlygasov, S. A., Golden hamsters (Cricetus auratus W., 1939) as an experimental animal for the study of infectious pathology. Zh. mikrobiologii, etc. 33 (1962) 6: 130-133.

This survey of the literature is quoted by title only.

689. IUshchenko, G. V. et al., Influence of cortisone on the course of the infectious process in white mice infected with pathogenic microbes. Zh. mikrobiologii, etc. 33 (1962) 6:134-138. (From the Central Anti-Plague Observation Station, MH, USSR.)

The conclusions reached by the authors of this article, which must be studied in detail by workers interested in plague and tularemia, were that

1. Under experimental conditions cortisone considerably enhanced the susceptibility of white mice to pseudo-tuberculosis, listeriosis, erysipeloid, pasteurilosis and salmonellosis. Consequently cortisone-treated white mice can be used with great advantage for animal tests conducted in the case of these infections.

2. Cortisone markedly increased the susceptibility of white mice to the vaccinal plague and tularemia strains and can thus be used in some experimental investigations on these strains.

3. If virulent plague or tularemia strains, highly pathogenic for white mice were tested, cortisone either did not further increase the sensitivity of the animals to the infection (tularemia) or but slightly increased it (plague).

4. The use of cortisone-treated white mice for animal experiments under the actual conditions of a plague focus did not prove advantageous.

690. Krut, A. P., Treatment of brucellosis patients with dry brucellosis vaccine. Vrachebnoe delo (1962) 6:114-115. (From the Department of Infectious Diseases, Dnepropetrovsk Medical Institute.)

The dry vaccine used by the author for the treatment of 15 brucellosis patients had been obtained from the Odessa Vaccine and Serum Institute. It was used according to the two-stage method of treatment of G.P. Rudner at first in

doses of 50,000-200,000 organisms and subsequently in such of 1-3 million organisms. As is necessary for obtaining a therapeutic effect, administration of these comparatively small doses produced post-vaccinal reactions. It was found, however, that treatment with identical doses of fluid brucellosis vaccine led to more intensive reactions. The author recommended therefore that for the treatment of brucellosis the dry vaccine ought to be used in 2-3 times higher doses than the fluid vaccine.

691. Urgent tasks of health protection of the rural population. (Leading article). Sovetskoe zdravookhranenie 21 (1962) 5: 5-8.

In this general article it is stated that more than 100,000 institutions are available in the Soviet Union to maintain the health of the rural population, including 160 oblast, krai or republic hospitals, over 3,000 hospitals for raions and about 15,000 for uchastki, and almost 83,000 stations (punkty) staffed by feld'shers and midwives. Moreover about 40% of the rural population can be hospitalized in the towns.

Nevertheless a further amplification of these services is called for and proposals to this effect are briefly discussed.

692. Mokhnenko, A. P., The role of the sanitary-epidemiological stations in lowering the morbidity of the population. Sovetskoe zdravookhranenie 21 (1962) 6: 44-48. (From the Department of Public Health Organization and Medical History, Leningrad Sanitary-Hygienic Medical Institute.)

Noting a marked decline in the incidence of infectious diseases in general, the author stresses the necessity of reducing the frequency of measles, pertussis, acute gastrointestinal affections and brucellosis, diseases which could be successfully fought.

693. Grombakh, S. M., S. G. Zybelin in the fight against the plague epidemics of 1771-1772. Sovetskoe zdravookhranenie 21 (1962) 6: 85-89.

This historical article is quoted by title only.

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694. Mironchenko, A. A., A study of the zonal distribution of pathogenic bacteria from hospital buildings into the atmospheric air. Gigiena i sanitariia 27 (1962) 5: 13-17. (From the Ukrainian Institute of Communal Hygiene.)

Quoted by title only.

695. Evseeva, N. P., Organization of public health work in the U. S. A review of the literature. Gigiena i sanitariia 27 (1962) 5: 78-83.

Quoted by title only.

696. Faibich, M. M. et al., On the survival of microorganisms during freezing. Zh. mikrobiologii, etc. 33 (1962) 5: 68-72.

Studying the protective action of glycerol on B. prodigiosus cultures subjected to freezing, the authors came to the conclusion that

"the survival of microbes under freezing is determined not only by biological or physiological peculiarities of the bacterial species in question, but depends also on the interaction of various physical, chemical and physico-chemical factors. A consideration of the influence of these factors is undoubtedly indispensable for the solution of many important problems in the realm of theoretical and practical microbiology."

697. Emelianova, O. S., On the possibility of increasing the sensitivity of the tularemia diagnosticum. Zh. mikrobiologii, etc. 33 (1962) 5: 84-88.  
(From the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

As stated in the introduction to this article, it has been found that the virulent tularemia strain 503, isolated in the USSR, was agglutinated by lower dilutions of anti-tularemia sera than the virulent American strain Schu. It seemed advisable under these circumstances to utilize the latter strain for the manufacture of formalized standard preparations for the serological diagnosis of tularemia, particularly in order to test



sera with low agglutination titers, e.g. such from domestic animals. Since, however, the routine handling of the highly virulent Schu strain was not convenient, the author attenuated this by a not specified method and used the variant No. 7, obtained in this way, for her work.

Making comparative tests, the author could divide the various antigens studied by her with the aid of different sera (including one from a tularemia patient and two from persons vaccinated against this infection) into two groups, namely, (a) the diagnostica issued by the Odessa Vaccine and Serum Institute and the strain 503 (formalized or live) with mean agglutination titers of about 1:600 and (b) the antigens No. 7 and Schu (likewise either formalized or live) with mean agglutination titers of 1:640 and much higher titers, when the live strains were used. No differences were found in these studies between the two last mentioned antigens (No. 7 and Schu).

The author did not think it advisable to use the diagnosticum prepared with the variant No. 7 for routine purposes, but recommended its use for dealing with sera reacting badly or not at all with the commonly used diagnostic antigens. Her formal conclusions were that:

1. The diagnosticum, prepared from the attenuated variant of the tularemia strain Schu - No. 7 - proved to be specific but better agglutinable than the usual diagnosticum.
2. The reactions with both the No. 7 and Schu cultures corresponded to the pattern of Vi-agglutination.
3. The new diagnosticum can be recommended for the detection of agglutinins in anti-tularemia sera with a low antibody level.

698. Bykov, L. T., On the vibrio flora of the Ural River and its tributaries. Author's summary. Zh. mikrobiologii, etc. 33 (1962) 5:118-119.  
(From the Ural Anti-Plague Station.)

Quoted by title only.

699. Timofeev, M. K. and Andronnikov, V. A., Experience of a retrospective examination of the population for tularemia with the aid of the tularin test. Author's summary. Zh. mikrobiologii, etc. 33 (1962) 5: 120-121.  
(From the All-Soviet Scientific Research Institute "Mikrob" and the Sanitary-Epidemiological Station of the Chuvash ASSR.)

In order to confirm the apparent absence of tularemia from the Chuvash Autonomous Republic, the authors subjected a representative group of 11,000 rural inhabitants (i.e. 1% of the total population) to cutaneous tularin tests. Positive results were obtained in 33 instances, but only 11 of the persons in question appeared to have contracted the infection within the confines of the republic.

While recommending the tularin test as an easy means to establish the past occurrence of tularemia, the authors pointed out that in areas where tularemia vaccination is administered without adequate registration, bacteriological examinations of ticks and wild rodents are necessary to prove or disprove the presence of tularemia.

700. Beliakov, V. D., A further contribution to the classification of epidemic diseases. Zh. mikrobiologii, etc. 33 (1962) 5:126-129. (From the Order of Lenin S. M. Kirov Military-Medical Academy.)

The scheme of classification advocated by the author was set forth by him in the following tabulation:

I. Anthroponoses

Intestinal Infections:

Dysentery  
Typhoid and paratyphoid  
Cholera  
Epidemic hepatitis  
Poliomyelitis

Air-borne Infections:

Influenza  
Smallpox  
Diphtheria  
Scarlet-fever  
Measles  
Mumps  
Pertussis

Vector-borne Infections:

Typhus  
Relapsing fever  
Malaria

Contact Infections:

Syphilis  
Gonorrhoea

II. Zoonoses

Intestinal Infections:

Salmonellosis

Brucellosis

Leptospirosis

Botulism

Anthrax

Psittacosis and ornithosis

Vector-borne Infections:

Plague

Tularemia

Rickettsiosis

Tick-borne encephalitis

Mosquito-borne encephalitis

Hemorrhagic fever

Mosquito fever

Yellow fever

Contact Infection:

Rabies

Sodoku

Dengue

Tick-borne relapsing fever

Leishmaniasis

It is noteworthy that this classification did not meet with the full approval of the editorial board of the Zhurnal.

701. List of important articles on infectious diseases quoted by title in the Zh. mikrobiologii, etc. 33 (1962) 5: 134-148.

Smallpox

- a. Kremer, V. E., Action of the antibiotics heliomycin and cerulomycin on the vaccinia virus. Antibiotiki 4 (1959) 6: 59-65.
- b. Marennikova, S. S. et al., Isolation and study of the properties of smallpox vaccine. Report I. Direct isolation of the virus in tissue cultures. Voprosy virusologii 6 (1959) :703-710.
- c. Morozov, M. A. and Korol'kova, M. I., "Selective dry stable smallpox vaccine." In Problemy epidemiologii i mikrobiologii (Problems of Epidemiology and Microbiology) Moscow, 1959, Vol. 1, pp. 222-226.

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- d. Rautenshtein, E. I. and Glezer, A. M., "On smallpox-like pustulosis in children." In Voprosy patologii detskogo vozrasta (Questions of Pathology of Child Growth) Leningrad, 1959, pp. 153-158.

Rickettsioses

- a. Amanzhulov, S. A. et al., To the study of Q-fever in the Alma-Ata Oblast. Zdravookhranenie Kazakhstana (1959) 10: 30-33.
- b. Amosenkova, N. I. et al., "Investigation of the small mammals in the Luzhski Q-fever focus. A preliminary report." In Zooantroponozy, Leningrad, 1959, pp. 71-79.
- c. Amosenkova, N. I. and Daiter, A. B., "On the survival of R. burneti in the bed-bug. Experimental data. Ibid., pp. 80-88.
- d. Vasil'eva, L. D., "Materials to the serodiagnosis of Q-fever." Ibid., pp. 28-42.
- e. Eadem, "Experience on Q-fever vaccination." Ibid., pp. 62-70.
- f. Eadem, "Experience on the isolation of R. burneti from the blood of Q-fever patients." Ibid., pp. 43-57.
- g. Eadem, "The complement fixation test in the diagnosis of Q-fever." Ibid., pp. 58-61.
- h. Daiter, A. B., "On the infectibility of the bed-bug (Cimex lectularius L.) with R. burneti in a Q-fever focus." Ibid., pp. 89-97.
- i. Tokarevich, K. N. and Vasil'eva, L. D., "Q-fever in Leningrad." Ibid., pp. 7-18.
- j. Tokarevich, K. N. et al., "Epidemiologic materials regarding Q-fever in the Leningrad Oblast." Ibid., pp. 19-27.
- k. Voshchakina, N. V. and Shaiman, M. S., Epidemiological survey of tick rickettsiosis and Q-fever in the raions of the northern forest-steppe region of the Omsk Oblast, similar in the character of the landscape to the Armizonski focus of tick-borne typhus (Tiumen Oblast). Trudy Omskogo nauchno-issledovatel'skogo instituta epidemiologii, etc. (1959) : 41-43.

- l. Genig, V. A., The attenuated variant "M" of R. burneti as a possible live vaccine against Q-fever. Vestnik Akademii meditsinskikh nauk SSSR (1962) 2: 46-57.
- m. Gubinskii, A. M., Clinique and differential diagnosis of Q-fever. Trudy Kirgizsko meditsinskogo instituta, Frunze (1959) 12:148-152.
- n. Larina, V. S. and Borodko, S. L., Q-fever in some raions of the Kalmyk Autonomous Republic. Sbornik nauchnykh rabot Elistinskoi protivochumnoi stantsii (Collected Scientific Works of the Elistinsk Anti-Plague Station) Shakhty (1959) 1:245-249.
- o. Lenskii, G. P., A case of psychosis in Q-fever. Zdravookhranenie Kazakhstana (1959) 11: 58-61.
- p. Makhmetov, M. M., Materials to the study of Q-fever in the Kustanaiskii Oblast. A preliminary communication. Ibid., 12: 50-53.
- q. Proreshnaia, T. L., On the distribution of Q-fever in the Soviet Union. Trudy 8-go respublikanskogo s'ezda meditsinskikh (Transactions of the VIIIth Republic Congress of Medical Workers of the Kirgiz SSR) Frunze, 1959, pp. 431-437.
- r. Sterkhova, N. N. and Entin, I. A. S., An instance of group incidence of Q-fever. Azerbaidzhanskii meditsinskii zhurnal (1959) 1: 74-79.
- s. Tokarevich, K. N. and Vasil'eva, L. D., Materials to the study of Q-fever in Leningrad and the Leningrad Oblast. Voprosy virusologii (1960) 1: 71-77.
- t. Iarovoi, L. V., To the problem of the epidemiology and clinique of Q-fever. Vrachebnoe delo (1959) 12:1327-1328.

#### Anthrax

- a. Agababian, M. M., Study of the distribution of anthrax vaccines in the body with the aid of radio-active indicators. Izvestiia Akademii nauk Armianskoi SSR, Biologicheskii nauki (1959) 12: 63-72.
- b. Borod'ko, S. L. and Samsonovich, L. G., Compatibility of plague, tularemia, brucellosis and anthrax live vaccines in guinea-pig experiments. Sbornik nauchnykh rabot Elistinskoi protivochumnoi stantsii. Shakhty (1959) 1:192-203.

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- c. Butyrina, P. S., To the problem of a search for more effective means of moist disinfection to free premises from anthrax spores. Sbornik nauchnykh rabot Sibirskogo nauchno-issledovatel'skogo veterinarnogo instituta (Collected Scientific Works of the Siberian Scientific Research Veterinary Institute) Omsk (1959) 8:279-283.
  - d. Gaidamaka, T. V., On the variability of the vaccinal anthrax strain STI. Thesis, Kiev (1959).
  - e. Zaporozhchenko, A. IA., Epidemiology of rare clinical forms of anthrax. Vrachebnoe delo (1959) 11:1205-1206.
  - f. Korotich, A. S. et al., Ways of liquidating anthrax. Ibid., 12:1303-1304.
702. Guseva, N. A. and Fitonova, L. I., The tularemia outbreak in Astrakhan in 1957-1958 and its causes. Zh. mikro-biologii, etc. 33 (1962) 7: 19-22.  
(From the Sanitary-Epidemiological Station of the Astrakhan Oblast.)

The conclusions reached by the authors of this well-written and instructive article were:

1. As a result of a widespread tularemia epizootic in the Volga lowlands in 1957-1958 there occurred a tularemia outbreak in the town of Astrakhan, situated 40-50 km from the focus.

2. Out of a total of 179 attacks 20 were due to the delta raions and 159 to the bites of diptera.

3. An overwhelming majority of the vector-borne affections (82%) among the people living in the town and its vicinity was observed at the time of a prevalence of winds blowing in the direction from the epizootic focus towards the town (August-September). This factor undoubtedly played a role in the transfer of infected mosquitoes from the natural focus into the town and its vicinity.\*

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\*In the text the authors also mention the possibility of a transport of infected mosquitoes in small river boats.

4. Taking account of the possibility of a transfer of infected mosquitoes far beyond the border of the foci, as exemplified by the 1957-1958 tularemia outbreak, it is indispensable considerably to enlarge the areas where anti-tularemia vaccinations are administered and to render the population of the town of Astrakhan fully immune against the infection.

The authors noted in the latter connection that during the period from the autumn of 1957 to the spring of 1959 7,128 persons had been vaccinated against tularemia in Astrakhan and its vicinity. Nevertheless 126 persons contracted tularemia in 1958. In the spring of 1959 179,499 of the people living in and around the town (i.e. 70% of the population) were vaccinated and only 6 town residents, who had visited the focus, contracted the infection.

703. Sukhodoeva, G. S., To the study of the natural Q-fever focus in the Zailiiski Ala-Tau. Zh. mikrobiologii, etc. 33 (1962) 7: 28-32. (From the Institute of Regional Pathology, AS, Kazakh SSR and the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

Investigations undertaken in an area of the Kazakhstan north-east of Alma-Ata led to the following conclusions:

1. With the aid of serological tests the presence of Q-fever infection was demonstrated in 10 species of small mammals and birds inhabiting the foot-hills of the Zailiiski Ala-Tau.

2. With the aid of guinea-pig experiments the presence of R. burneti was ascertained in four of these species - Citellus maximus, C. intermedius, Meriones erythrorus and Mustela eversmanni.

3. The presence of natural Q-fever infection was also established in the ticks Hyalomma scupense and Dermacentor daghestanicus.

4. For the first time in the southern Kazakhstan Q-fever cultures were isolated from C. intermedius, M. erythrorus and the tick H. scupense as well from the blood of a patient.

704. Timofeev, M. K. et al., An anthrax outbreak on the Arzamas-Gor'kii cattle-driving trail. Zh. mikrobiologii, etc. 33 (1962) 7: 32-35. (From the All-Soviet Scientific Research Institute "Mikrob" and the Sanitary-Epidemiological Station of the Gor'kii Oblast.)

As described in this article, lack of an adequate supervision led to a considerable outbreak of anthrax, affecting, besides 56 heads of cattle, 7 cattle-drivers and 2 employees of the meat-packing plant. As a result of this spread of the infection about 50 tons of meat had to be condemned. Ways and means to prevent such outbursts of anthrax are discussed.

705. Aleksandrov, N. I., Gefen, N. E. et al., Aerosol immunization with dry dust vaccines and anatoxins. Report VIII. Study of a method of aerosol immunization of large groups of people with dry anti-plague vaccine. Zh. mikrobiologii, etc. 33 (1962) 7: 46-50.

The authors used for their studies a dry plague vaccine prepared from the EV strain, which was dispersed with the aid of an electrical fan from a special apparatus mentioned only by its serial number (PAB-60). Immunization was done in an ordinary room with a cubic content of 112 m<sup>3</sup> which had standing room for up to 119 persons. Altogether the method was used for 543 persons, all men 18-25 years old. From their careful observations of the immunized persons the authors concluded that

1. Aerosol immunization of man with a dry plague vaccine, used in a dosage of 150-200 million of live organisms of the vaccinal EV strain produces practically no reactions, but leads to characteristic changes in the peripheral blood of the vaccinated.

2. The method of aerosol immunization, used under practical conditions in sufficiently large groups of people, proved to be quite simple and rendered it possible to produce mass immunizations within a short period.

It is noteworthy that the authors did not test so far the immunological efficacy of their method of vaccination.

Subcutaneous vaccination with the EV strain, administered for the sake of comparison to a group of 100 young adults, led to marked local reactions in 98 and to severe general reactions in 66.

Cutaneous (epidermal) vaccination of an analogous group of 5,600 persons was not followed by severe general reactions. A local reaction was noted in 96% of the vaccinated.

706. Silich, V. A. and Shevzova, Z. V., Experience with combined vaccinations against brucellosis and Q-fever. Zh. mikrobiologii, etc. 33 (1962) 7: 66-72. (From the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)



In the conclusion of this well documented study the authors stated that combined (simultaneous or consecutive) administration of brucellosis and Q-fever vaccines to guinea-pigs led to an immunity against both infections which did not materially differ from the immunity produced by the corresponding monovaccines. It appeared thus possible to take practical advantage of this method of combined vaccination.

707. Shchepot'ev, N. V. and Popov, N. A., On the principles of an organization of anti-rodent campaigns under the conditions of railway transport. Zh. mikrobiologii, etc. 33 (1962) 7: 82-88.  
(From the Railroad Anti-Plague Laboratory and the Volgograd Sanitary-Epidemiological Station of the Provolzhski Railroad.)

This well documented study can be quoted by title only. It does not lend itself to the purposes of a brief analysis.

708. Bauman, V. M., Clinical and epidemiological characterization of a botulism outbreak due to the consumption of canned flounders. Zh. mikrobiologii, etc. 33 (1962) 7: 92-95. (From the Medical Service of the Pacific Fleet.)

Quoted by title only.

709. Dashkevich, I. O. et al., To the method of processing bacteriological preparations with fluorescent antibodies. Zh. mikrobiologii, etc. 33 (1962) 7:101-107.  
(From the Departments of Microbiology and Biochemistry of the Order of Lenin S. M. Kirov Academy of Military Medicine.)

The technical details of this article must be studied in the original or in a translation of the text.

710. Vereninova, N. K. et al., To the problem of an accelerated diagnosis of tularemia. Report I, Detection of tularemia in rodent carcasses. Zh. mikrobiologii, etc. 33 (1962) 7:107-110.  
(From the "Mikrob" the Institute of Microbiology and Epidemiology of the South-east of the USSR.)

Summarizing their findings the authors stated that

1. For the purposes of a rapid diagnosis of tularemia in rodent carcasses it is possible to make slide agglutination tests with suspensions of the triturated spleen of the animals. Preparation and performance of these tests require not more than 10-15 minutes.

2. The agglutination reaction is more efficacious than the methods of precipitation and bacterioscopy, but less sensitive than animal experimentation.

3. The above described slide agglutination tests permit a diagnosis of tularemia in 100% of the animals highly susceptible and sensitive to this infection ("first group") but rarely give positive results in the little sensitive animals of the second group.

711. Konchev, K. L., Sterilization of needles and instruments with the aid of glycerol. Zh. mikrobiologii, etc. 33 (1962) 7:114-116.  
(From the Municipal Hospital of Popov, Bulgaria.)

Finding that even anthrax bacilli were killed by an exposure for 0.5 minute to glycerol at temperatures of 160-210°C, the author recommended the use of this substance for the sterilization of needles and instruments for injection.

712. Kniazeva, E. N., Studies of the peculiarities of the course of a mixed brucellosis and Q-fever infection in guinea-pigs. Zh. mikrobiologii, etc. 33 (1962) 7:125-130.  
(From the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

The conclusions reached through these studies were that

1. Guinea-pigs, infected simultaneously, but at different sites with virulent brucellosis and R. burneti cultures contract both brucellosis and Q-fever. The presence of the latter disease is manifested by a period of fever, the formation of specific infiltrations and the appearance of complement-fixing antibodies, that of brucellosis by an abundance of brucellae in the organs, the production of antibodies and the development of a specific allergic state.

2. The presence of virulent brucellae in the body of the animals evidently did not materially influence the course of Q-fever.

3. Brucellosis infection, reaching the phase of generalization after 15 days, did not exert a stimulating influence on the length and intensity of the rickettsial infection. Still, in the guinea-pigs which had had Q-fever, one could note a more rapid and intensive accumulation of agglutinins as well as a higher phagocytic activity of the neutrophils during the first three months, i.e. at the acme of the brucellosis infection.

4. It may thus be postulated that under the conditions of these experiments the mixed infection stimulated the activity of the reticulo-endothelial system of the guinea-pigs. However, final conclusions in this respect will be possible only after histological studies.

713. Sidorov, V. E. and Gubina, E. A., On the preservation of the properties of the vaccinal strain Br. abortus 19-BA in the tick Ornithodoros lahorensis Neumann. Zh. mikrobiologii, etc. 33 (1962) 7:130-133. (From the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

The investigations of the two authors showed that a prolonged persistence of the brucellae in the tick O. lahorensis exerted no adverse influence on the organisms and even seemed to increase their tendency to produce a generalized infection. As the authors added, the ticks in question could be used for a prolonged maintenance of brucellae - up to periods of 18-22 months.

714. Elkin, I. I., On the ways of developing the theories of epidemiology. Zh. mikrobiologii, etc. 33 (1962) 7:137-141.

This article contains the text of a report rendered by Elkin at a meeting of the Section of Hygiene, Microbiology Epidemiology of the USSR Academy of Medical Sciences convening in March 1962. The speaker claimed inter alia that cholera and smallpox had been "liquidated" in the Soviet Union. In regard to plague he made the following statement:

"Plague is zoonosis. The raions of its spread are related to its natural foci. To liquidate plague in a given territory means to liquidate the natural

foci. One may say that in principle this task is solved. At present effective methods have been worked out for the eradication of the rodents - the fundamental natural reservoirs of the infection - and of the fleas, the vectors of the infection. With the aid of these methods one may reduce the rodent populations to such a degree that the epizootic process is cut short. Two natural plague foci within the territory of the USSR have been liquidated. However, there exist still active natural foci, the liquidation of which has not been possible for various reasons. Nevertheless, in these foci also there exists no human plague, as medical science has an effective complex of prophylactic measures: prophylactic vaccination, eradication of rodents and fleas in the settlements and in a protective belt (around them) and constant observations of the rodents and fleas in the natural foci with the aim of a timely detection of the appearance of epizootics. In this respect human plague has been liquidated but there exists a constant danger of its appearance among the people living in the natural foci."

715. Balandin, G. A., Is brucellosis an intestinal infection? Zh. mikro-biologii, etc. 33 (1962) 7:141-144.  
(From the Rostov-on-Don Scientific Research Anti-Plague Institute, MH, USSR.)

As stated in the concluding paragraphs of this amply documented article the author considers

"Brucellosis first of all as an infection of agricultural animals, in which it is maintained according to the laws governing infectious diseases of the group of intestinal (alimentary) infections. Man is in the case of brucellosis invariably an accidental recipient of the infection, playing literally no role in the epizootic process. He becomes involved in this as a result of his work for the care and exploitation of brucellosis-infected agricultural animals.... For some groups of the population (workers in cattle-breeding and meat or milk processing establishments) brucellosis is an occupational danger, in which the mechanism of the infection is determined by the degree of contact with the natural reservoirs of the infection and the factors of its spread."

However, the author continued, human brucellosis was by no means always the result of contact infection. Thus consumption of raw milk or milk products obtained from brucellosis-affected animals could lead to an alimentary infection while the shearing of sheep affected by the disease might produce an air-borne infection. Brucellosis ought to be classified, therefore, in the group of infectious diseases with different routes of infection. In the author's opinion most zoonotic affections fell into this category.

716. Shishulina, L. M., Use of pancreatin for the detection of Cl. botulinum toxin in mixed cultures. Gigiena i sanitariia 27 (1962) 6: 53-55.

Quoted by title only.

717. L'vov, D. K. and Naumov, R. L., Transovarian transmission of the tick-encephalitis antibodies in the blackbird (Turdus pilaris L.). Meditssinskaja parazitologija, etc. 40 (1962) 3:335-338.  
(From the Poliomyelitis and Virus Encephalitis Institute, AMS, USSR and the Martsinovskii Institute of Medical Parasitology and Tropical Medicine, MH, USSR.)

The conclusions reached by the two authors were that

1. A transovarian transmission of the antibodies to tick-borne encephalitis in blackbirds was confirmed.
2. There exists a direct relation between the state of humoral immunity in the female birds and the immunity level in their young.
3. The overwhelming majority of the young birds loses the immunity to tick-borne encephalitis within a week after they have first left their nests.

718. Nefedov, V. N. and Burkovskii, V. E., Preliminary results of a zoological-parasitological study of the tick-encephalitis foci in the Altai Krai. Meditssinskaja parazitologii, etc. 40 (1962) 3:338-341.  
(From the Department of Parasitology of the Sanitary-Epidemiological Station of the Altai Krai.)

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As stated in this article, the details of which do not lend themselves to the purposes of a brief review, the presence of the tick-encephalitis virus was demonstrated in 45 out of 92 lots of the tick Ixodes persulcatus and in a number of small mammals (specially voles) as well as in two species of birds. I. persulcatus was no doubt the main vector of the infection.

719. Pchelkina, A. A., Contributions to the study of the tick-encephalitis focus in the Kalininsk Oblast. Meditinskaya parazitologiya, etc. 40 (1962) 3:341-342.  
(From the Department of Infectious Diseases with a Focal Occurrence ("natural focality") of the Gamaleia Institute of Epidemiology and Microbiology.)

As can be gathered from this report, the details of which do not lend themselves to condensation, the presence of the tick-encephalitis virus could be demonstrated only in the tick Ixodes persulcatus, but not in mammalian hosts.

720. Darskaia, N. F. et al., Study of the annual cycle of the gerbil-flea Xenopsylla conformis Wagn. in Azerbaidzhan. Meditinskaya parazitologiya, etc. 30 (1962) 3:342-346.  
(From the Scientific Research Anti-Plague Institute of the Caucasus and Transcaucasus and the Azerbaidzhan Anti-Plague Station.)

Quoted by title only.

721. Lariukhin, M. A. et al., Experience on the small-droplet spraying of insecticides from airplanes in the fight against the vectors of tick-borne encephalitis in the Anzhero-Sudzhenski Raion during the period 1957-1959. Meditinskaya parazitologiya, etc. 40 (1962) 3:347-351.  
(From the Department of Entomological Toxicology and Disinsectization of the E. N. Martsinovskii Institute of Medical Parasitology and Tropical Medicine, MH, USSR, the Government Scientific Research Institute of the Civilian Air Fleet and the Anzhero-Sudzhenski Municipal Sanitary-Epidemiological Station.)

As stated in this report, the spraying of DDT emulsions and of polychloropinene in the taiga forests of the above mentioned district in the Kemerovo Oblast (Central Siberia) from airplanes led to a disappearance of tick-encephalitis attacks in 1958 and 1959, whereas 15 cases of the disease had been recorded in 1956-1957.

- 722a. Berendiaeva, E. L. and Kul'kova, N. A., To the ecology of the fleas of the grey marmot. Trudy Sredne-Aziatskogo nauchno-issledovatel'skogo protivochumnogo instituta (Transactions of the Middle Asian Scientific Research Anti-Plague Institute) 7 (1961) :273-283.
- b. Bibikova, D. I. and Chekalin, V. B., To the knowledge of the ectoparasites in the corridors of the marmot burrows and evaluation of the methods of collecting these ectoparasites in the Tian'-Shan. Ibidem, 285-292.
- c. Varivodina, T. A. and Sokolova, A. A., Results of flea collection with cotton and cotton-cloth tampons from the corridors of marmot burrows in the South Aksai. Ibidem, 361-363.
- d. Shvarts, E. A. et al., On the infectibility of the arthropods in the nests and furs of marmots with plague. Ibidem, 189-191.
- e. Shvarts, E. A. et al., Distribution and frequency of fleas in the nests of marmots and their epidemiological importance. Ibidem, 41-54.

These five articles are quoted by title in a reference list inserted in the journal Meditssinskaia parazitologiya, etc. 40 (1962) 3: 375.

723. Petrov, V. G., On the transovarian passage of the tularemia bacillus in the tick Dermacentor marginatus Sulz. Meditssinskaia parazitologiya, etc. 31 (1962) 1: 62-66. (From the Tularemia Laboratory of the Department of Naturally Focal Infections of the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

The large-scale studies of the author, confirming the observations of previous workers, furnished no evidence of a transovarian passage of the tularemia bacillus. The adaptation of this organism to the ticks seemed therefore not complete.

724. Gorchakovskaia, N. N., The tactics of a direct extermination of the ticks in the fight against tick-borne encephalitis. Meditssinskaia parazitologiya, etc. 31 (1962) 1: 62-72. (From the Poliomyelitis and Virus-Encephalitis Institute, AMS, USSR.)

As described in this article, the technical details of which must be studied in the original or in a full translation, it was possible to control the tick-vectors of encephalitis with the aid of DDT or, for shorter periods, with benzene hexachloride. Smokepots proved useful for the protection of workers staying in the forests for short periods.

725. Tagil'tsev, A. A., Some comparative ecological data on ticks and gamasid mites. Medit'sinskaia parazitologiya, etc. 31 (1962) 1: 73-78. (From the Kazakh Institute of Epidemiology, Microbiology and Hygiene.)

This amply documented article can be quoted by title only.

726. Zolotov, P. E., Efficacy of dusting from airplanes in respect to Ixodes persulcatus P. Sch. during the first and second year following the treatment (1959-1960). Author's review. Medit'sinskaia parazitologiya, etc. 31 (1962) 2:211-212. (From the Rostov Scientific Research Institute of Medical Parasitology, MH, RSFSR.)

As the author concluded, his findings showed, in accord with previous observations, the high efficacy of airplane dusting with 10% on the whole tick population not only during the first but also during the second year after treatment.

727. IAgodinskii, V. N., An instance of the isolation of the virus of tick-borne encephalitis from a horse-fly. Medit'sinskaia parazitologiya, etc. 31 (1962) 2: 236. (From the Department of Microbiology of the Order of Lenin S. M. Kirov Academy of Military Medicine.)

As stated in a footnote by the editors, the positive findings made by the author in a horse-fly (Tabanus flavicornis) were presumably the result of a merely mechanical ingestion of the tick-encephalitis virus and were, therefore, of no epidemiological significance.

728. Aksenenko, G. R., Some data on the ectoparasites of the small mammals of the Kola Peninsula. Medit'sinskaia parazitologiya, etc. 31 (1962) 2:236-239.

Quoted by title only.

729. Important articles quoted in reference lists inserted in numbers 1 and 2 of the journal Meditsinskaia parazitologiya, etc. Vol. 31 (1962).



No. 1

A. Ticks

- a. Bykov, L. T. et al., To the problem of the role of tick (Rhipicephalus schulzei Ol.) in the natural plague foci. Report 2. The fate of the plague bacillus in the organism of the tick. Trudy Rostovskogo-na-Donu nauchno-issledovatel'skogo protivochumnogo instituta 18 (1961) :72-77.
- b. Daiter, A. B. and Amosenkova, N. I., Experimental infection of the tick Ornithodoros papillipes Bir. with R. burneti. Trudy Leningradskogo instituta epidemiologii i mikrobiologii 23 (1961) :166-180.
- c. Idem: On the natural infection of the tick Ixodes ricinus L. with R. burneti. Ibidem, pp. 154-165.
- d. Dziubak, F. I. et al., Experiences on the use of the insecticidal pots NBKG-17. Sbornik nauchnykh rabot voenno-meditsinskogo otdela dal'nevostochnogo voennogo okruga (Collected Scientific Works of the Division of Military Medicine of the Far Eastern Military Okrug). Khabarovsk (1961) pp. 373-377.
- e. Lev, M. I. et al., On the dusting of the taiga foci of tick-encephalitis with acaricides from airplanes. Ibidem, pp. 385-391.
- f. Idem: On trials with wettable DDT dust and polichlorpinene in the tick-encephalitis foci of the Khabarovsk Krai. Ibidem, 378-384.
- g. Zhumatov, Kh. Zh. and Dmitrienko, N. K., Peculiarity of the natural tick-encephalitis foci in the Kazakhstan. Report Rendered at the Tashkent Conference on Diseases of Countries with a Warm Climate. Moscow (1961).
- h. Levkovich, E. N., The problem of the viruses of tick-encephalitis group. Ibidem.
- i. Karpov, S. P., Characteristics of the Tomsk tick-encephalitis focus and measures for its sanitation. Trudy nauchno-issledovatel'skogo instituta psykhiatrii ministerstva zdravookhraneniia RSFSR (Transactions of the Scientific Research Institute of Psychiatry of the Ministry of Health, RSFSR) 26 (1961) :175-181.

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- j. Terent'ev, V. F., To the problem of the final outcome in the meningial from of tick-borne encephalitis. Ibidem, pp. 187-190.
- k. Shubin, N. V., Tick-encephalitis in Western Siberia. Ibidem, pp. 182-186.
- l. Kurchatov, V. I. et al., Two years' experience of the method of fighting ixodes ticks with the aid of the aviation-chemical method. Tezisy dokladov nauchnoi sessii Kubanskogo meditsinskogo instituta (Abstracts of Papers Read at the Scientific Session of the Kuban Medical Institute). Krasnodar (1961) :41-42.
- m. Mnatsakanian, A. G. et al., On the detection of new tularemia foci in the republic. Referaty i doklady nauchnoi sessii instituta epidemiologii i gigieni, 18-19 maia 1961 (Abstracts and Papers of the Scientific Session of the Institute of Epidemiology and Hygiene, 18-19 May 1961). Erevan (1961) :24-25.
- n. Nefedov, D. D. and Belov, E. E., To the problem of tick-borne encephalitis in the Gor'kov Oblast. Sbornik trudov Gor'kovskogo nauchno-issledovatel'skogo instituta epidemiologii i mikrobiologii (Collected Works of the Gor'kov Scientific Research Institute of Epidemiology and Microbiology) (1960) 6:127-131.
- o. Sukhodoeva, G. S., To the study of the Q-fever focus in the foot-hill zone of the Zailiiskii Ala-Tau. Zdravookhranenie Kazakhstana (1961) 8: 54-59.
- p. Tezisy dokladov soveshchaniia po voprosam zoologicheskikh issledovani v prirodnykh ochagakh kleshchevogo entsefalita (Theses of the Reports of the Conference on the Problem of Zoological Investigations in the Natural Tick-Encephalitis Foci). Publication of the Moskovskoe obshchestvo ispytaniia prirody. Moscow (1961).
- q. Fastovskaia, E. I., Prophylaxis of tick-borne encephalitis. Fel'dsher i akusherka (1961) 9: 24-25.
- r. Shilova, S. A. et al., Evaluation of the efficacy of treatment from airplanes in the tick-encephalitis foci of the Lys'venskii Raion of the Perm Oblast. Trudy tsentralnogo nauchno-issledovatel'skogo dezinfektsionnogo instituta (Transactions of the Central Scientific Research Institute of Disinfection) 14 (1961) :249-283.

- o. Idem: Use of new acaricides and raticides in the natural foci of tick-borne encephalitis. Ibidem, pp. 243-248.

B. Bed-bugs and fleas

- a. Balashov, I. U. S. and Daiter, A. B., Localization and dissemination of R. burneti in the body of the bed-bug. Trudy Leningradskogo instituta epidemiologii i mikrobiologii 23 (1961) :181-189.
- b. Val'kov, B. G. et al., To the methodology of the examination of fleas. Sbornik nauchnykh rabot Elistinskoi protivochumnoi stantsii (Collected Scientific Works of the Elistinskii Anti-Plague Station) (1961) 2: 255-259.
- c. Daiter, A. B., On the routes of excretion of R. burneti by the bed-bug Cimex lectularius L. Trudy Leningradskogo instituta epidemiologii i mikrobiologii 23 (1961) :190-195.
- d. Kosminskii, R. B., Study of the biology of the mouse-fleas. Thesis. Stavropol (1961).
- e. Kosminskii, R. B. et al., Sensitivity of different flea species to DDT. Doklady Akademii nauk SSSR 139 (1961) 4:1020-1022.
- f. Labunets, N. F. and Kafarskaia, D. G., New fleas of Tadzhikistan. Zoologicheskii zhurnal 40 (1961) :1423-1427.
- g. Tinker, I. S., Campaigns against the synanthropic rodent fleas as a radical method of the prophylaxis of bubonic plague in towns. Trudy Rostovskogo-na-Donu nauchno-issledovatel'skogo protivochumnogo instituta (Transactions of the Rostov-on-Don Scientific Research Anti-Plague Institute) 18 (1961) :125-129.
- h. Shiranovich, P. I., Current problems of the study of fleas in connection with the sanitation of the natural plague foci. Ibidem, pp. 67-71.
- i. Shtelman, A. I., On the state of infection of the fleas on plague-infected midday and tamarisk gerbils. Ibidem, pp. 24-29.

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C. Insecticides

- a. Vashkov, V. I. and Turich, M. L., Problems of the disinfection, disinsectization and deratization of transport vehicles and cargoes on the frontiers. Trudy tsentralnogo nauchno-issledovatel'skogo dezinfekcionnogo instituta 14 (1961) :311-316.
- b. Vashkov, V. I. and Turov, I. S., Means and methods of disinfection, disinsectization and deratization in the German Democratic Republic. Ibidem, pp. 317-330.

No. 2

A. Ticks

- a. Volkova, A. A. et al., Comparative data on the infection of the ticks of the genus Dermacentor with brucellae. Prirodnaia ochagovost' boleznei i voprosy parazitologii (Natural Foci of Diseases and Questions of Parasitology). Alma-Ata (1961) 3:106-107.
- b. Ershova, L. S., The role of the tick Ornithodoros lahorensis in the preservation and transmission of the tularemia bacillus. Ibidem, pp. 525-528.
- c. Igolkin, N. I., Fleas and gamasid ticks in the nests of small mammals in the tick-encephalitis foci. Ibidem, pp. 539-543.
- d. Karpov, S. P. and Kolmakova, A. G., Materials to the nosogeography of tick-encephalitis in western Siberia. Ibidem, pp. 55-58.
- e. Kolmakova, A. G. and Fedorov, I. V., Materials to the ecology of Ixodes persulcatus in the forest type of tick-encephalitis foci. Ibidem, pp. 502-505.
- f. Kuzov, V. N., Ornithodoros ticks in Kazakhstan and their epidemiological importance. Ibidem, pp. 510-517.
- g. Makhmetov, M. M., Spontaneous Q-fever infection of the ectoparasites of the coast swallow. Ibidem, pp. 70-74.
- h. Karpov, S. P. and Popov, V. M., Tick-borne Encephalitis and the Measures for Its Control. 7th edition. Tomsk (1961).

- i. Koniukhov, M. P., Results of a two years' study of the ixodes ticks in Western Kazakhstan. Report I. Trudy nauchno-issledovatel'skogo veterinarnogo nauch (Transactions of the Scientific Research Veterinary Institute of the Kazakh Academy of Agricultural Sciences) 10 (1961) :489-498.
  - j. Petrishcheva, P. A., Destruction of Tick-vectors of Tick-Borne Encephalitis. 3rd edition. Moscow (1961).
  - k. Tatarinova, L. G., Experimental basis of the role of the tick Haemaphysalis japonia douglasi N. as a vector of tick-borne encephalitis. Doklady Akademii nauk SSSR 140 (1961) 2:510-512.
  - l. Tatarinova, L. G. and Belikova, N. P., On the experimental transmission of the tick-encephalitis virus by the tick Haemaphysalis neumannii. Ibidem, 3:734-735.
  - m. Khasis, G. L., The problem of tick-encephalitis from the therapeutic viewpoint. Terapevticheskii arkhiv 33 (1961) 6: 75-84.
  - n. Levkovich, E. and Karpov, S., Symposium on the biology of the viruses of the tick-encephalitis group. Voprosy virusologii (1961) 6:756-760.
- B. Other ectoparasites
- a. Dorofeev, K. A., Japanese encephalitis. Veterinariia (1961) 11: 83-84.
  - b. Soldatkin, I. S. et al., Investigation of the activity of feeding of the fleas of the large gerbils under natural conditions with the aid of radio-active indicators. Zoologicheskii zhurnal 40 (1961) 11:1647-1650.
  - d. Surki, -, Ecology, ectoparasites and occurrence in natural foci (natural focality) of plague. Trudy Sredne-aziatskogo nauchno-issledovatel'skogo protivochumnogo instituta (Transactions of the Middle Asian Scientific Research Anti-Plague Institute). Frunze (1961) No. 7.
730. Margolina, T. E., to the clinique of postvaccinal smallpox meningo-encephalitis. Sovetskaia meditsina 26 (1962) 7:100-102. (From the Medical Department of Municipal Hospital No. 50, Moscow.)

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This is a report on a patient falling seriously ill 8 days after smallpox vaccination, but recovering under terramycin treatment.

731. Iakovlev, A. I. and Polozov, A. I., Changes in the complement-fixing activity of the antigen prepared from R. burneti. Zh. mikrobiologii, etc. 33 (1962) 8: 75-79.

The final conclusion of the authors of this article, which must be studied in detail by those interested in the immunology of Q-fever, were that

- a) It is recommended to use for the preparation of fully suitable diagnostic antigen of R. burneti, as necessary for the examination of the sera of test animals, the strains Grita or Konstantisa, which have been subjected to not less than 15 passages through chick embryos.
- b) Further investigations are necessary to determine the conditions of the preparation of fully suitable diagnostic Q-fever antigens for the diagnosis of this diseases in convalescents and in domestic animals.

732. Fedorova, N. I. and Diuisalieva, R. G., The dependence of the antigenic activity of R. burneti on the phasic variability. Zh. mikrobiologii, etc. 33 (1962) 8: 95-100. (From the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

In the introduction to this well documented article its authors pointed out that, as noted by several observers, in complement fixation tests Q-fever antigens prepared from freshly isolated strains prove less active than the antigens of stock strains. To explain this difference, Stoker (J. of Hygiene, London 51 [1953] :313) and Fiset (J. of Microbiology 3 [1957] :435) postulated that R. burneti undergoes a phasic change, being in phase I under natural conditions and also in experimentally infected laboratory animals, gradually changing into phase II if adapted to cultivation in chick embryos. Further studying this problem, the authors reached the following conclusions:

1. The antigenic activity of R. burneti in complement fixation tests depends upon the cultivation of the strains from which the antigens are derived.
2. The antigens from strains, which have been subjected to not less than 15-20 passages through the yolk sac of

chick embryos, are considerably more sensitive and with their aid the presence of antibodies may be demonstrated in the sera of patients as well as in those of persons in late convalescence.

3. Making reactions with the antigens obtained from the spleen of Q-fever infected white mice it is not possible to demonstrate complement-fixing antibodies in sera of acutely ill patients or of early convalescents. Late in convalescence (from the 40th day onwards) also complement fixation tests with the spleen-antigens prove positive, but at lower titres than is the case in tests with egg-antigens.

4. The activity of the antigens does not depend upon the number of rickettsial corpuscles they contain but is due to a qualitative difference in the antigenic structure of the rickettsiae in the first or second phase.

5. For the diagnosis of Q-fever it is useful to make parallel complement fixation tests with both phase I and phase II antigens. A positive reaction with the egg-antigen and a negative one with the spleen antigen testifies to the presence of Q-fever, a positive reaction with both antigens indicates a past infection. However, further investigations are necessary to establish the value of such tests.

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from  
Soviet Biomedical Journals

No. 11, Section 2

Prepared by  
Dr. Robert Pollitzer



733. Koshelev, N. F. et al., Comparative characterization of the sporocidal action of gaseous chlorine and of hypochlorite in water. Gigiena i sanitariia 27 (1962) 8: 99-100. (From the Department of General and Military Hygiene and of Microbiology of the S. M. Kirov Military-Medical Academy.)

Experimenting with anthracoid bacilli, the authors found that the action of a solution of gaseous chlorine on these organisms in water was much higher than that of hypochlorite solution.

734. L'vov, D. K., Immunological state of the population inhabiting two types of tick-borne encephalitis pseudofoci. Meditinskaya parazitologiya, etc. 31 (1962) 4:387-392. (From the E. I. Martsinovskii Institute of Medical Parasitology and Tropical Medicine, MH, USSR, and of the Poliomyelitis and Virus Encephalitis Institute, AMS, USSR.)

Serological examinations were made in two localities of Western Siberia - villages with a stable population and a small town, where newcomers formed about 1/3 of the population.

In the villages a state of immunity to tick-borne encephalitis was found to be present in 12% of the children 2-5 years old, in 36% of those of 6-10 years, in 67% of the age-group 11-20, in 89% of the adults from 21-40 years and in 96% among those over 40 years.

In the urban center an immunity level of only 64% was found among the adults, but antibodies were found in 81% of the permanent residents.

The author recommended that a complete course of vaccination against tick-borne encephalitis should be administered to the whole population of the urban center as well as to the children in the villages. The adult population of the latter ought to receive single vaccine doses every year.

In the course of the investigations it was established that the proportion between clinically manifest and symptomless tick-borne encephalitis attacks was one to 17-18.

735. Slonov, M. N., Seasonal changes in the activity of ixodes ticks in the different types of natural tick-encephalitis foci in the Primorskii Krai. Meditinskaya parazitologiya, etc. 31 (1962) 4:398-407. (From the Entomological Department of the E. I. Martsinovskii Institute of Parasitology and Tropical Medicine, MH, USSR.)

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The details of this amply documented study on the activity of Ixodes persulcatus, Haemaphysalis japonica douglasi, H. concinna and Dermacentor silvarum must be studied in the original or in a full translation.

736. Lamanova, A. I., Delayed oviposition by the tick Dermacentor marginatus. Meditssinskaia parazitologiya, etc. 31 (1962) 4:407-412. (From the Department of General Biology of the Karaganda State Medical Institute.)

Quoted by title.

737. Zolotarev, E. Kh. and Elizarov, IU. A., To the methodology of the laboratory investigations of repellents against the tick Ixodes persulcatus P. Sch. Meditssinskaia parazitologiya, etc. 31 (1962) 4:434-436.

738. Zhukova, L. I., On the improvement of the methods for the laboratory testing of repellents against the tick Ixodes persulcatus. Meditssinskaia parazitologiya, etc. 31 (1962) 4:436-438. (From the Entomological Department of the E. I. Martshinskii Institute of Medical Parasitology and Tropical Medicine, MH, USSR.)

These two notes, describing and illustrating the implements recommended by the authors for the evaluation of tick repellents can be quoted by title only.

739. Zemskaia, A. A. and Pchelkina, A. A., The relation of gamasid ticks to the virus of tick-borne encephalitis. Meditssinskaia parazitologiya, etc. 31 (1962) 4:439-442. (From the Department of Natural Foci Diseases of the N. F. Gamaleia Institute of Experimental Medicine, AMS, USSR.)

Experimenting with Eulaelaps stabularis, Haemolaelaps glasgowi, Haemogamasus nidi, Dermanyssus gallinae, D. hirundinis and Ornithonyssus bacoti the authors reached the following conclusions:

Gamasidae are capable of ingesting the tick-encephalitis if feeding on sick animals. Evidently, however, the virus is ingested in quantities insufficient for its subsequent demonstration by the usual methods. The virus could be found in lots of 50-150 specimens of O. bacoti and D. gallinae, species apt to ingest the comparatively largest amounts of blood at a single meal.

The virus of the investigated strains evidently does not enter into a specific relation with the organism of the ticks and does not multiply within them. Analogous results were obtained by Igolkin et al. (see Meditinskaja parazitologija, etc. 28 [1959] 5: 568), even though they fed their ticks (E. stabularis, H. glasgowi, H. casalis, H. spec. and Haemogamasus mandschuricus) with blood containing a higher concentration of the virus. The longest period of persistence of the virus was 18 days in the case of E. stabularis.

Nevertheless the present authors maintain that these preliminary findings require further investigations in the foci of the infection.

740. Osipian, V. T. et al., Methodology of the examination of garments impregnated with flea repellents. Meditinskaja parazitologija, etc. 31 (1962) 4:481-482.  
(From the Order of Lenin S. M. Kirov Military-Medical Academy.)

The description of the technique recommended by the authors for the evaluation of flea repellents does not lend itself to a brief review.

741. Zhmaeva, S. M. et al., Characterization of the natural foci of tick-borne encephalitis in the Altai Krai. Meditinskaja parazitologija, etc. 31 (1962) 4:486-487.  
(From the Department of Natural Foci Diseases of the N. F.\*Institute of Epidemiology and Microbiology, AMS, USSR.)

In 1955-1956 a high incidence of tick-borne encephalitis was recorded in the Altai Krai, the number of cases amounting in May-August 1955 to 90 and in 1956 to 146. The authors were instructed to study the situation with a view of working out prophylactic measures. As stated in their present brief note, they found red field mice (Clethrionomys glareolus) to be the main reservoir of the infection, Ixodes persulcatus its vector.

742. List of important papers quoted by title in the journal Meditsinskaja parazitologija, etc. 31 (1962) 4:493-498.
- a. Al'tshtein A. D. et al., Use of a method based on the interference between the viruses of tick-encephalitis and poliomyelitis in tissue cultures for the serological examination

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\*Gamaleia

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of people vaccinated against tick-borne encephalitis, Avtoreferaty dokladov na rassh. zased. komiteta po bor'be s kleshch. entsefal. v Kemerovo (Author's Abstracts of Papers of the Expanded Session of the Committee for the Prevention of Tick Encephalitis in Kemerovo) Omsk, 1962, p. 76.

- b. Ananian, S. A., Anti-hemagglutinins against the tick-encephalitis virus and the viruses of the type of the North-American equine encephalomyelitis in some groups of the population. Ibidem, pp. 30-31.
- c. Babenko, L. V. et al., Methodology of the identification and determination of the prognosis of their abundance of the tick Ixodes persulcatus according to the material of the station in the Krasnoiarsk Krai. Ibidem, pp. 52-55.
- d. Barkova, E. A., Immunogenesis in the different clinical forms of tick-borne encephalitis. Ibidem, 87-88.
- e. Busygin, F. F. et al., Contact of the population with ticks in the villages of the endemic regions of the Novosibirsk and Omsk oblasts. Ibidem, pp. 18-21.
- f. Gorchakovskaia, N. N. et al., Epidemiological evaluation of the efficacy of vector destruction in the foci of tick-borne encephalitis. Ibidem, pp. 61-64.
- g. Idem: Numerical variations of the components of the biocoenosis of a tick-encephalitis focus (Salair Ridge) and destruction of the natural focus with the aid of acaricides. Ibidem, pp. 47-50.
- h. Erofeev, V. S., Virus and serological investigations in the Tomsk focus of tick-borne encephalitis. Ibidem, pp. 38-39.
- i. Zemskaya, A. A. and Suvorova, L. G., Some regularities in the territorial distribution of the different phases of the taiga tick in the tick-encephalitis focus in the south of the Kirov Oblast. Ibidem, pp. 50-52.
- j. Igolkin, N. I. et al., Zoological-parasitological observations in the Tomsk Oblast and problems of forecasting tick-borne encephalitis. Ibidem, pp. 55-57.
- k. Izotov, V. K. and L'vov, D. K., On the possibility of using the hemagglutination inhibition reaction for epidemiological purposes in tick-borne encephalitis. Ibidem, p. 73.

- l. Kantorovich, R. A. et al., To the methodology of a rapid serological survey in potential foci of tick-borne encephalitis. Ibidem, p. 74.
- m. Idem; Experiences of immuno-epidemiological studies of different tick-encephalitis foci. Ibidem, pp. 25-26.
- n. Karpov, S. P. and Selezneva, A. A., Diagnostic importance of the hemagglutinin inhibition reaction in tick-borne encephalitis. Ibidem, pp. 71-72.
- o. Karpov, S. P. et al., Materials to the sanitation of the Tomsk tick-encephalitis focus. Ibidem, pp. 64-65.
- p. Kulakova, Z. G., Infection of sexually mature Ixodes persulcatus ticks with the tick-encephalitis virus in the Lys'va Raion of the Perm Oblast. Ibidem, pp. 43-45.
- q. Levkovich, E. N. et al., Use of the methods of interference and cytopathogenetic activity in tissue cultures for the diagnosis of tick-borne encephalitis. Ibidem, pp. 74-76.
- r. L'vov, D. K. et al., Materials for the typing of the pseudo-foci of tick-borne encephalitis in 4 raions of the Kemerovo Oblast. Ibidem, pp. 16-17.
- s. Mel'nikova, E. E. and Tsirkin, I. U. M., Use of a new complement-fixing antigen for the serodiagnosis of tick-borne encephalitis. Ibidem, pp. 77.
- t. Mishchenko, N. K., To the results of the vaccination of goats against tick-borne encephalitis in the Malmyzhskii Raion of the Kirov Oblast. Ibidem, pp. 12-13.
- u. Morozov, I. U. V., To the characterization of the state of immunity in the wild animals in the tick-encephalitis foci of the Perm Oblast. Ibidem, pp. 57-58.
- v. Netskii, G. I., Characterization of the natural foci of tick-borne encephalitis and tick-typhus in the Toguchinskii Raion of the Novosibirsk Oblast and the problem of typing the foci. Ibidem, pp. 31-34.
- w. Netskii, G. I. et al., Epidemiological and entomological efficacy of the method of fighting the tick-vectors of tick-borne encephalitis with the aid of distribution of chemicals from airplanes in a village raion with a widely spread incidence of the disease. Ibidem, pp. 68-69.

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- x. Idem: Results of the determination of the degree of carriage of the virus by ixodes ticks in the foci of tick-encephalitis and Omsk hemorrhagic fever in Western Siberia (1959-1961). Ibidem, 39-43.
- y. Pivanova, G. P. et al., Experience on the use of the hemagglutination inhibition reaction for the diagnosis of tick-borne encephalitis according to the materials collected in the Kemerovo Oblast in 1961. Ibidem, pp. 70-71.
- z. Pogodina, V. V. et al., Results of the study of latent carriage of the virus and latent immunization in tick-borne encephalitis. Ibidem, pp. 21-23.
- aa. Popov, V. F., On the epidemiological efficacy of formolized vaccine in a focus of tick-borne encephalitis. Ibidem, pp. 9-10.
- ab. Idem: Experience of the use of specific gamma-globulin for prophylactic and therapeutic purposes. Ibidem, pp. 10-11.
- ac. Idem: The state of immunity of the population of villages situated in the territory of the natural tick-encephalitis foci in the southern raions of the Kirov Oblast. Ibidem, pp. 29-30.
- ad. Pchelkina, A. A. et al., Territorial distribution and changes in the frequency of ticks infected with the virus in the natural tick-encephalitis focus in the south of the Kirov Oblast. Ibidem, pp. 45-47.
- ae. Sarmanov, E. S., Virusological and serological observations on tick-encephalitis patients in the Kemerovo Oblast in 1961. Ibidem, pp. 82-83.
- af. Spitsina, L. N. et al., Inapparent forms and their frequency in tick-borne encephalitis. Ibidem, pp. 23-24.
- ag. Umanskii, K. G., Clinical characterization of the disease-attacks recorded in 1961 in the Kemerovo Oblast with the diagnosis "tick-borne encephalitis." Ibidem, pp. 78-80.
- ah. Chumakov, M. P. et al., Comparative study of the reactions and the efficacy of the culture and brain vaccines against tick-encephalitis according to the epidemiological experiences in the Kemerovo Oblast in 1961. Ibidem, pp. 6-8.

- ai. Shilova, S. A., Detection of zones of different epidemiological danger in tick-encephalitis foci and principles of the prophylactic measures in them. Ibidem, pp. 35-38.
- aj. IAv'ia, A. R., Observations on the reactions and the epidemiological efficacy of the tissue vaccine against tick-borne encephalitis. Ibidem, pp. 8-9.
- ak. Kulakova, Z. G., On the role of fleas in the circulation of the tick-encephalitis virus. (Experimental data.) Ibidem, 58-60.
- al. Zalutskaya, L. I., To the study of the Verchotur'ski tick-encephalitis focus. Voprosy ekologii (Kiev) 8 (1962) 48-49.
- am. Shilova, S. A., Dynamics of the frequency of the tick Ixodes persulcatus P. Sch. and its hosts in the natural tick-encephalitis foci. Ibidem, pp. 140-142.
- an. Karpov, S. P. et al., Observations on the hemagglutination inhibition reaction in tick-borne encephalitis. Trudy Tomskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok (Transactions of the Tomsk Scientific Research Institute of Vaccines and Sera) 13 (1961) : 55-60.
- ao. Idem: Further investigations on the epidemiology of tick-borne encephalitis in the Tomsk Oblast. Ibidem, pp. 31-35.
- ap. Minkevich, I. A. et al., Clinique and diagnosis of the acute phase of tick-borne encephalitis according to the materials of the infectious diseases clinic. Ibidem, pp. 36-41.
- aq. Murina, L. M., Observations on the reactions produced by the 2.5% brain vaccine against tick-borne encephalitis. Ibidem, 289-291.
- ar. Plakhova, N. B. et al., On the cause of the reactions produced by the gamma-globulin against tick-encephalitis. Ibidem, pp. 325-329.
- as. Kerbabaev, E. B., The ixodes ticks of Tularemia, their pathogenic importance and distribution in the republic. Voprosy kraevoi parazitologii Turkm. SSR (Questions of Regional Parasitology of the Turkmen SSR) Ashkhabad, 3 (1962) :215-222.
- at. Pavlukhin, S. M., Some data on the geography of tick encephalitis in Siberia. Geograficheskii sbornik 14 (1961) :145-155.

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743. Iarovoi, L. V., Clinique and treatment of sheep-goat type brucellosis in the stage of focal lesions. Sovetskaia meditsina 26 (1962) 8: 72-80.  
(From the Department of Infectious Diseases of the Stavropol Medical Institute.)

This article contains a detailed analysis of the clinical symptoms shown by 102 brucellosis patients in the stage of focal lesions and also an evaluation of the results of laboratory diagnosis in the described stage of the disease was fraught with difficulties, results in 10 out of the 102 patients being negative. The results of their treatment is shown in the following table:

<u>Mode of Treatment</u>	<u>Number Treated</u>	<u>Compensation</u>	<u>Results</u>	
			<u>Subcompensation</u>	<u>No Results</u>
Antibiotics*	49	17	29	3
With vaccine	13	3	10	0
Symptomatic	40	10	29	1
Totals	102	30	68	4

\*Mostly with synthomycin and levomycetin.

744. Silich, V. A. et al., The immunological efficacy of combined vaccinations against Q-fever and brucellosis. Zh. mikrobiologii, etc. 33 (1962) 9: 68-71. (From the Gamaleia Institute of Epidemiology and Microbiology and the Sanitary-Epidemiological Station of Krasnodar Krai.)

The similarity of the epidemiological features of Q-fever and brucellosis as well as that of their prophylaxis made it desirable to use a method of combined vaccination against these two infections. Since guinea-pig experiments had shown the efficacy of such combined vaccinations, the present authors tested this method in human volunteers. They used for this purpose a killed Q-fever vaccine and a live brucellosis vaccine prepared from the strain Br. abortus BA 19 (1 billion organisms per ml). The two vaccine were mixed ex tempore by adding to the contents of the Q-fever vaccine. 0.5 ml of the mixed vaccine were administered subcutaneously and 2 weeks later a 1 ml dose of Q-fever vaccine was given by the same route. A group of volunteers vaccinated only against Q-fever served as control.



It was found that the combined vaccinations caused only insignificant reactions and led to an immunological response against both infections. The authors recommended therefore to make practical use of this method.

745. Nikonov, A. G. et al., Some data on the phagolysis of cholera vibrios in water. Zh. mikrobiologii, etc. 33 (1962) 9: 83-87. (From the Scientific Research Anti-Plague Institute, MH, USSR, Rostov-on-Don.)

Quoted by title only.

746. Sil'chenko, V. S., Eradication of human tularemia in a zone with active natural foci of the infection. Zh. mikrobiologii, etc. 33 (1962) 9: 87-92. (From the Sanitary-Epidemiological Station of the Voronezh Oblast.)

The important observations recorded by the author of this article were made in the Povorinskii Raion of the Voronezh Oblast in the basin of the Khoper River (an affluent of the Don), an area heavily infested with water-rats which were intensively hunted since 1934. The abundance of these rodents, combined with the presence of the notorious tularemia vectors Dermacentor marginatus and Ixodes ricinus as well as suitable environmental and climatic conditions led to the formation and continued existence of a natural focus of the infection. The incidence of tularemia in this raion since 1930 is shown in the following tabulation (years without available records omitted):

1930	2	1944	0	1951	4
1934	103	1945	1,481*	1952	3
1936	32	1946	347	1953	1
1938	185	1947	1	1954/56	0
1939	6	1948	10*	1957	2
1941	33	1949	62*	1958/59	0
1943	377*	1950	5	1960	1

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\*Years with a heavy tularemia incidence in the oblast in general.

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The prevailing types of these outbreaks were as follows:

<u>Years</u>	<u>Types of Outbreaks</u>
1930-1937	In connection with water-rat hunting and vector-borne.
1938, 1945	Water-borne outbreaks.
1943, 1945-46	In connection with agricultural operation and intra-domestic (mouse-borne).
1947-1949	Mainly vector-borne, but also water-borne and in connection with water-rat hunting.

The absence of manifestations standing in connection with agricultural operations since 1946 appeared to be due to an improvement, specially to the mechanization of this work. Since, however, neither steps to improve the waterways nor measures against the water-rats and the tick-vectors were taken, the natural tularemia focus continued to exist, positive cultures from the water-rats being isolated as late as 1960. That nevertheless during the last decade only sporadic human attacks of tularemia occurred, seems to be due solely to the mass immunization of the population against this infection.

The first vaccination campaign in the Povorinskii Raion was conducted with full success in 1943 under the personal direction of Gaiskii, when 2,214 persons were immunized with the fluid live vaccine devised by this worker. The work was resumed in 1946 when wholesale use was made of cutaneous vaccinations mainly with the fluid egg-yolk vaccine according to El'bert's method, but partly with the dry NIEG vaccine. These campaigns were completed in 1949, when systematic revaccinations of the population were started. Large-scale epidermal tests with tularin showed the presence of a mass immunity of the population amounting in several settlements to 96.4-97.3 per cent of the people. The incidence of tularemia at the time of the large tularemia outbreaks in the oblast in 1948 and 1949 was comparatively low and since then only sporadic cases were recorded in some years. The local water-rat hunters, who almost invariably contracted tularemia in the past, remained entirely free from the disease, because they had been protected by vaccination. The only person who fell ill with tularemia in 1961 during the hay harvest had not been vaccinated.

As the author added, in 1950 a mass vaccination campaign (more than 1.5 million vaccinations) was conducted in the

Voronezh Oblast as a whole, followed in 1954 by revaccination in raions showing an increased incidence of the disease. In 1958-1960 revaccinations were also administered in the other parts of the oblast to a total of 1,200,000 persons. This, as the author claimed, led to an almost complete disappearance of human tularemia in spite of the existence of a large number of active tularemia foci. The incidence of the disease in the Voronezh Oblast since 1949 was as follows:

<u>Year</u>	<u>Cases</u>	<u>Year</u>	<u>Cases</u>	<u>Year</u>	<u>Cases</u>
1949	1,602	1953	93	1957	21*
1950	47	1954	35	1958	1
1951	17	1955	11	1959	2
1952	132	1956	2	1960	1

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\*The increased incidence in 1957 was due to the inclusion of a district where little vaccination work had been done.

The conclusions of the author were that

1. The administration of anti-tularemia vaccine in a zone with active natural foci leads to a complete termination of tularemia outbreaks of any type.

2. The experience with the fight against tularemia in the Voronezh Oblast showed that properly organized vaccinations administered in a planned manner (vaccination and obligatory revaccination within 5 years) to the whole population led to a marked reduction of the tularemia incidence which was reduced to single sporadic cases exclusively among not vaccinated persons.

3. A complete eradication of human tularemia is fully possible if carefully organized vaccinations are combined with other anti-epidemic measures.

747. Andzhaparidze, O. G. et al., Morphological and histochemical changes in the neurons of the central nervous system of white mice during the process of immunogenesis in tick-borne encephalitis. Zh. mikrobiologii, etc. 33 (1962) 9: 92-97. (From the Moscow Institute of Virus Preparations.)

The authors experimented with white mice passively immunized with specific gamma-globulin before or after infection with the virus of tick-borne encephalitis. Their conclusions were that

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1. In the course of the development of the infective process in mice infected with the tick-encephalitis virus one could note, besides characteristic pathological changes in the nervous system, a lowering of the ribonucleoprotein content in the neurons of the central nervous system.

2. During the process of immunogenesis one could observe in the neurons of a number of the formations of the brain and the spinal marrow an intensive enrichment in ribonucleoproteins, what could be explained by the establishment of specific protective reactions in the nervous tissues.

3. The specificity of these changes in the ribonucleoprotein content of the neurons is confirmed by the resistance of the experimental animals to re-infection.

748. Makarov, N. I. et al., The incidence of anthrax in the population of the Precaucasian and Transcaucasian republics and the prophylaxis of the disease. Zh. mikrobiologii, etc. 33 (1962) 9:105-111. (From the Scientific Research Anti-Plague Institute of the Caucasus and Transcaucasus, the Azerbaidzhan, Dagestan and Amernian Anti-Plague Stations, the Georgian, Checheno-Ingush and Armenian Republic Sanitary-Epidemiological Stations.)

The conclusions reached in this article, which has to be studied in detail by those interested in the problems of anthrax, were:

1. Attacks of anthrax in man in the Pre- and Trans-Caucasian republics occur mainly among the rural population (94% of the total incidence) since they are due mainly to the attendance on sick animals and their secret slaughtering.

2. The infection of persons engaged in the processing of raw materials derived from domestic animals was considerably more rare (6% of the total), but still above the All-Soviet average (0.5%).\*

3. The anthrax incidence among children up to 15 years was comparatively high.

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\*However, as stated in the text, in the highly industrialized Moscow Raion into which much of the above mentioned raw materials was imported, the anthrax incidence was much higher in industrial workers (60%) than among agricultural workers (18%).

4. Incomplete epidemiological investigations appeared to be responsible for the high percentage of anthrax attacks of unexplained origin.

5. Systematic anti-anthrax vaccination of the cattle even in single doses considerably lowered the incidence of the disease among animals and man.

6. The methods of lowering the anthrax incidence in man and of sanitating the foci are generally known. The success of the work depends upon a careful accounting for all foci (irrespective of their age) and a systematic use of veterinary prophylactic measures - yearly vaccination of the cattle, close control over their secret slaughtering and of the disposal of the infected carcasses, categorical prohibition to open animals succumbed to anthrax, to skin them and to bury them.

7. The anti-epidemic services of the raions must keep an accurate account of the anthrax foci and must be acquainted with their extent and epizootological characteristics, so as to conduct together with the veterinarians systematic work to sanitize the foci of the infection in the ground and to implement currently measures for preventing the incidence of the disease in man.

749. Zaporozhchenko, A. IA., Epidemiological and clinical characterization of anthrax attacks. Zh. mikrobiologii, etc. 33 (1962) 9:111-115. (From the Central Scientific Research Laboratory of Hygiene and Epidemiology of the Ministry of Communications.)

The data of this important study of 2,400 anthrax attacks observed from 1920 to 1959 among railway employees and their families do not lend themselves to the purposes of a detailed review. It may be noted, however, that the geographical distribution of these attacks was as follows:

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<u>Region</u>	<u>Number</u>	<u>Per cent</u>
Central-Asiatic republics	640	26.63
North Caucasus and Transcaucasus	880	36.65
Povolzh'e (middle and lower course of Volga)	460	19.16
West Siberia	260	10.80
East Siberia	30	1.25
Oblasts of south-east USSR	120	5.10
Oblasts of south-west USSR	10	0.41
Totals	2,400	100.00

The conclusions reached by the author were that

1. A study of the epidemiology of anthrax based on 2,400 cases met with during 40 years (1920-1959) showed that one had to deal in 58.7% with sporadic attacks, in 14.1% with familial foci (simultaneous appearance of the disease in 2 persons) and in 27.2% with outbreaks in 3 or more persons who were affected within periods of up to 10 days and had a common source of infection.

2. A clinical study showed in 94.1% the presence of cutaneous anthrax, in 5.2% that of the intestinal form and in 0.7% the presence of the lung or ocular type. The fatality rate in general was 9.33%, that of lung or ocular anthrax 100%.

3. The infections stood in relation to the profession of the patients in 25.7%, to their way of life in 74.3%.

4. The intestinal affections were the results of the consumption of the meat of animals succumbed to anthrax or of food products which the persons in question had infected with their anthrax-contaminated hands.

750. Ponomareva, T. N. et al., Comparative data on the isolation of bacterial cultures from the internal organs and washings from the pharynx of rodents. Zh. mikrobiologii, etc. 33 (1962) 9:116-119.  
(From the Central Observation Station, MH, USSR.)

The author found that, when examining R. norvegicus, the percentage of isolations of Pasteurella multocida, Erysipelothrix and Listeria monocytogenes was considerably higher when, instead of from the internal organs, materials obtained by swabbing the pharynx of the animals were used for cultivations.

Except in the case of P. multocida, the new method did not prove useful for the examination of M. musculus.

751. List of important references on brucellosis quote by title in the Zhurnal mikrobiologii, etc. 33 (1962) 9: 155.
- a. Abrakhanova, B. N., Electrophoretic examination of the serum proteins in brucellosis and their significance. Sbornik trudov Azerbaidzhanskogo instituta usovershenstvovaniia vrachei (Collected Works of the Azerbaidzhan Institute for the Advanced Training of Physicians) 4 (1960) : 89-95.
  - b. Avakian, Sh. L., Affection of the liver and the cardiovascular system in brucellosis. Trudy Erevanskogo meditsinskogo instituta 10 (1959) :281-285.
  - c. Alekberova, F. A., To the clinique and the treatment of brucellosis in Dagestan. Tezisy i avtoreferaty докладov nauchnoi konferentsii posviashchennoi 40-letiiu so dnia ustanovleniia sovetskoi vlasti v Dagestane (Topics and Authors' Abstracts of Papers Read at the 40th Anniversary of the Establishment of the Soviet Regime in Dagestan) Makhachkala (1960) : 23-25.
  - d. Ambartsumov, S. M., The acid-base potential of the blood in brucellosis patients. (Clinical and laboratory investigations.) Avtoref. dissertatsii kand. (Authors' Dissertation Abstracts of Candidates) Tashkent (1960).
  - e. Balandin, G. A. et al., "On cutaneous vaccination against brucellosis. Preliminary report." In Prirodnaia ochagovost' i epidemiologiia osobo opasnykh infektsionnykh zabollevanii (Natural Foci and the Epidemiology of Particularly Dangerous Infectious Diseases) Saratov (1959) :502-513.
  - f. Bisiarina, V. P., Clinical characterization of sporadic brucellosis in children. Voprosy okhrany materinstva i detstva 5 (1960) 2: 54-58.

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- g. Vasil'eva, N. I., Blood production in brucellosis patients under treatment with antibiotics and vaccine. Tezisy dokladov 17-i nauchnoi sessii Orenburgskogo meditsinskogo instituta (1960) : 48-49.
- h. - , Blood production in patients with acute brucellosis, treated with biomycin. Trudy Orenburgskogo meditsinskogo instituta 7 (1960) : 18-25.
- i. Vershilova, P. A. et al., "To the problem of the possibility of an occurrence of brucellosis in natural foci." In Prirodnaia ochagovost' i epidemiologiya osobo opasnykh infektsionnykh zabolevaniy, Saratov (1959) :466-475.
- j. Volkova, A. A. et al., Comparative data on the infectibility of ticks of the genus Dermacentor with brucellosis (Br. bovis and Br. Melitensis). Izvestiia Akademii nauk Kirgizskoi SSR. Seriya biologicheskikh nauk, Saratov 1 (1959) 2: 15-29.
752. Gubina, N. E. et al., A differential molybden medium for plague and pseudo-tuberculosis bacilli. Zh. mikrobiologii, etc. 33 (1962) 10: 12-15. (From the Scientific Research Anti-Plague Institute of the Caucasus and Transcaucasus.)

The authors used the medium devised by G. V. Andreeva (Laboratornoe delo, 1959, 2: 40 for work with intestinal bacteria for a differentiation of P. pestis and P. pseudo-tuberculosis. This medium consisted of

Nutrient broth or agar (pH 7.3)	100 ml
Glucose	1%
5% alcoholic solution of rosolic acid	0.2%
Ammonium molybdate	0.4%
Glycerol	1%
Urea	1%
10% solution of Na <sub>2</sub> CO <sub>3</sub>	17.5 ml per liter of medium

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The medium is steamed once for 30 minutes in a Koch sterilizer. It becomes red after sterilization.



Cultivation of 82 plague strains in or on this medium at 28°C invariably led to its decoloration, whereas the 79 pseudo-tuberculosis strains tested failed to produce this change. The authors recommended therefore this medium, which kept well, for the differentiation of the two pasteurella species. They also stated that the addition of ammonium molybdate ( $[\text{NH}_4]_2\text{MoO}_4$ ) to plain media stimulated the growth of P. pestis.

753. Tabakov, P. K. et al., A rapid method of obtaining antibodies labelled with fluorescent stains. Zh. mikrobiologii, etc. 33 (1962) 10: 26-30.  
(From the All-Soviet Scientific Research Institute "Mikrob," Saratov.)

In the summary to this article, the technical directions of which must be studied in the original or in a translation, it is stated that:

1. A description has been given of new methods for (a) the isolation of immune euglobulins (antibodies) from plague and cholera agglutinating sera; and (b) the purification of the labelled antibodies from the excess of fluorochrome.
2. The employment of these new methods shortens the time of preparing luminescent conjugates from 3-4 weeks to 3-4 days.
3. The proposed method of preparing labelled antibodies, because not necessitating special installations, can be used in any laboratory.
4. The Soviet-manufactured fluoresceine isothiocyanate was found to be superior to fluoresceine isocyanate.
5. The immune euglobulins isolated with the aid of the new method were electrophoretically identified as gamma-globulins.

754. Dunaeva, T. N., To the methods of bacteriological examinations in tularemia. Zh. mikrobiologii, etc. 33 (1962) 10: 35-40. (From the Gamaleia Institute of Epidemiology and Microbiology, AMS, USSR.)

The author of this article postulated that the negative results of cultivations made with slightly tularemia-infected tissues were due not to the properties of the (highly sensitive)

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yolk media but to the paucity or even absence of the causative organisms on the cut surface of the organs used for implantation of the cultures. Dunaeva used therefore saline suspensions of the organs to be tested for cultivations on the usual egg-yolk media as well as on media consisting of agar "Delta" with glucose, cystin and 10% defibrinated blood and obtained in this way results comparable to tests in white mice with the latter medium. Summarizing her experiences she stated that

"The use of cultivations of organ suspensions permits the isolation of tularemia bacilli from animals which - in order to accelerate the diagnosis - were killed in the early stages of the infection, and also from animals in the phase of disappearance of the disease, when the number of causative organisms in the organs is small as well as from vaccinated animals. For a quantitative assessment of the bacilli in the test animals one may use cultivations made with dilutions of the organ suspensions in place of the tedious method of titrations in white mice."

755. Levi, M. I. et al., The passive hemagglutination reaction and the antibody neutralization test in some infections. Zh. mikrobiologii, etc. 33 (1962) 10: 40-45.  
(From the Scientific Research Anti-Plague Institute, Rostov-on-Don.)

The technical details of this study, made with plague, tularemia, cholera, anthrax, typhoid and typhus antigens, do not lend themselves to the purposes of a brief review.

756. Kozlov, M. P., The seasonal cyclical incidence of brucellosis and the determination of the periods for vaccination. Zh. mikrobiologii, etc. 33 (1962) 10:111-116.  
(From the Scientific Research Anti-Plague Institute of the Caucasus and Transcaucasus.)

The conclusion reached in the article, which contains valuable information on the brucellosis situation in the republics north of the Caucasus was that owing to differences in the mode of infection the incidence of the disease in the various professional groups the times suitable for their vaccination fell into different seasons. Vaccination 2-3 months before the lambing period was optimal for the workers on sheep-breeding farms, but not for the members of most other occupational groups, for which the times suitable for immunization had to be determined on an individual basis.

757. Zatulovskii, B. G. and Bondarenko, V. I., Study of Q-fever in the Ukrainian SSR. Zh. mikrobiologii, etc. 33 (1962) 10:116-121. (From the Kiev Institute of Epidemiology and Microbiology.)

Summarizing the results of their observations, the two authors stated that

1. In 1959-1960 Q-fever patients were found for the first time in Chernigov, Kiev and the Kiev Oblast.
2. The affections were mostly of an occupational type. Besides instances of acute attacks, 99 persons were detected with the aid of complement fixation tests who had been affected in the past by Q-fever in either a manifest or symptomless form. 82 persons of this group worked in establishments handling raw products of animal origin.
3. Complement fixation tests with the sera of 1,966 heads of cattle gave slightly positive results in 30 instances.
4. Examinations of ticks collected in the affected areas for the presence of R. burneti gave negative results and there was no evidence pointing to the existence of natural Q-fever foci in these parts.
5. These findings indicate the necessity for systematic Q-fever investigations in the Ukrainian SSR.

758. Kostromina, E. E., Some materials regarding the epidemiology of Q-fever in the western Ural. Author's summary. Zh. mikrobiologii, etc. 33 (1962) 10:140-141. (From the Perm Vaccine and Serum Institute.)

This short note refers to the occurrence of in part quite considerable Q-fever manifestations in the Perm Oblast since 1957. As the author postulated, these outbreaks stood in causal connection with the presence of the infection not only in cattle and goats but also in the rats (R. norvegicus), in some of which complement-fixing antibodies were found in the course of one of the two major outbreaks.

759. Efimtseva, E. P., Pyrogenic properties of one of the polysaccharide fractions of V. cholerae. Author's review. Zh. mikrobiologii, etc. 33 (1962) 10: 141.

Quoted by title only.

Notice

No. 11, Sections 1 and 2 will be the final number in Volume I of Selected Abstracts from Soviet Biomedical Journals.

The next series will be designated as Volume II. Because of variations in the pertinent material available a regular number of folios cannot be foreseen for Volume II. However a similar announcement will be included at the end of Volume II.

An Index for Volume I is in preparation and will be completed in the near future.

The Editor  
December 1962